

Highlights

Overview

This issue of the *Natural Gas Monthly* provides the first estimates for the full year 1999 for many data series at the national level. Estimates of natural gas prices are available through September 1999 for most series. Highlights of the data estimates contained in this issue are:

Net imports of natural gas showed a considerable increase of 13 percent in 1999, aided by pipeline capacity expansions that went on line in late 1998.

Dry natural gas production in 1999, at 18,716 billion cubic feet, kept pace with that of 1998.

End-use natural gas consumption in 1999, at 19,625 billion cubic feet, was nearly 1 percent higher than in 1998.

Natural gas end-use prices through September 1999 are generally lower than in 1998 during the same period, but the national average wellhead price exceeds that of 1998.

Supply

Both net withdrawals from storage and increased imports helped to meet the rise in natural gas consumption seen in 1999, as production of natural gas remained even with the 1998 level. Preliminary estimates show that 18,716 billion cubic feet of dry natural gas was produced in 1999, virtually the same as the 1998 level (Figure HI1, Table 1). However, in

1998, production had declined by 1 percent from the 1997 level. On a monthly basis, dry production during 1999 was generally lower than that of 1998 through August, then exceeded the 1998 levels the rest of the year. The largest increase occurred in September 1999, when production was 92 billion cubic feet, or 6 percent higher than in September 1998. The year ended with an estimated 1,590 billion cubic feet produced in December 1999, 52 billion cubic feet, or 3 percent more than in December 1998.

Net imports of natural gas rose considerably in 1999, reaching an estimated 3,373 billion cubic feet, 13 percent more than the 1998 level (Table 2). Several pipeline expansions took place in late 1998, increasing the capacity to import natural gas from Canada, the source of almost all natural gas imports into the United States.¹ The largest expansion was 700 million cubic feet by Northern Border Pipeline Company, increasing import capacity on that system by roughly one-third. This expansion mainly serves customers in the Chicago, Illinois area.

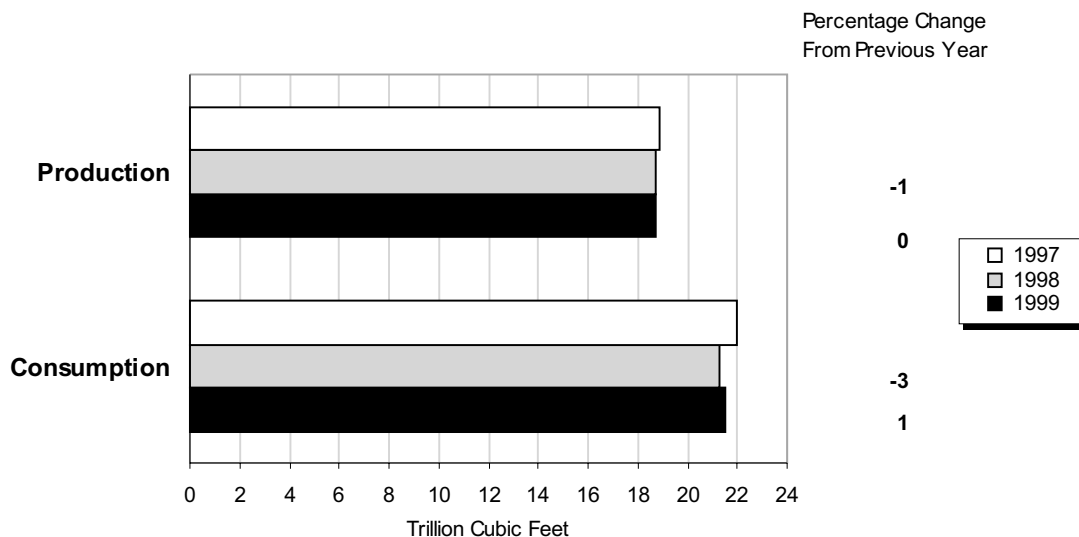
Other pipeline activity in late 1999 provides the potential for further increases in imports during 2000. Natural gas production began flowing from newly developed fields in the North Atlantic off Sable Island, east of Nova Scotia, Canada on December 18, 1999.² Initial production was 110 million cubic feet per day. Production is expected to increase quickly to 400 million cubic feet per day despite a shut down of production in early January 2000 to repair mechanical problems.³ The gas is being transported through the new Maritimes and Northeast Pipeline to serve markets in eastern Canada and New England. Initial

1 Energy Information Administration, *Natural Gas Annual*, DOE/EIA-0131(98) (Washington, DC, October 1999), pp. 18-20.

2 Sable Offshore Energy, Inc. "News Releases," <http://www.soep.com/soep-bin/pr-get?80> (January 4, 2000).

3 Individual.com, "Gas stops flowing from Canada's Sable project." <http://www.individual.com/story.shtml?story=d0107160.700> (January 10, 2000).

Figure HI1. Natural Gas Production and Consumption, January-December, 1997-1999



Source: Table 2.

flow in this onshore pipeline began on January 4, 2000. Import capacity on this line at the U.S. border is currently 400 million cubic feet per day. Production from the Sable Island fields is expected to exceed 500 million cubic feet per day by the end of 2000.

Withdrawals of natural gas from underground storage facilities exceeded injections during 1999, the reverse of what occurred in 1998. Storage activities relate more to the heating season (November through March) and the refill or nonheating season (April through October) than they do to the calendar year. However, net withdrawals during the calendar year 1999 were 159 billion cubic feet, while during 1998 they were -526 billion cubic feet—the negative value indicating that more gas was injected into storage than withdrawn (Table 9). Working gas in storage at the end of December 1999 is estimated to be 2,464 billion cubic feet. While this is 10 percent lower than at the end of December 1998, it is the second-highest level of working gas for the end of December since 1994 (Figure HI2).

End-Use Consumption

End-use consumption of natural gas is estimated to be 19,625 billion cubic feet in 1999, 156 billion cubic feet, or nearly 1 percent higher than in 1998 (Table 3 and Figure HI3). End-use consumption in 1998 had

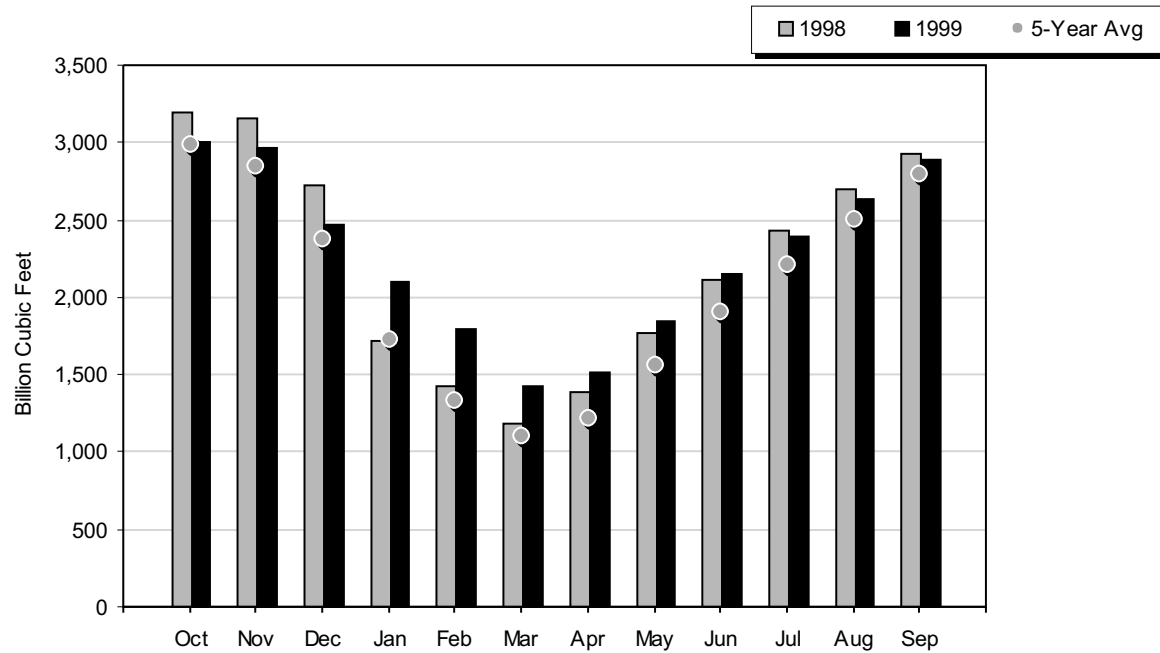
been 3 percent lower than in 1997. The increase in 1999 is attributed to the residential and commercial sectors, which both increased consumption by 3 percent compared with 1998. Residential consumption in 1999 was 4,650 billion cubic feet and commercial consumption was 3,094. The industrial sector continued to account for the largest proportion of end-use consumption in 1999, 44 percent. Estimated at 8,694 billion cubic feet in 1999, industrial consumption was only 8 billion cubic feet higher than in 1998, an increase of one-tenth percent.

Consumption estimates for the electric utility sector are available only through September 1999. Cumulatively through September, electric utility consumption of natural gas is estimated to be 2,541 billion cubic feet. This is 4 percent lower than in 1998 but 8 percent higher than in 1997 for the same period.

Prices

Estimates of wellhead, city gate, and most end-use prices are available for the first three-quarters of 1999 (Table 4). Cumulatively, end-use prices in 1999 were lower than in 1998, while the average wellhead price exceeded that of 1998 (Figure HI4). The average monthly wellhead price increased in August and September 1999, in contrast to 1998, when it declined during those months. Thus, the September 1999 estimate of \$2.42 per thousand cubic feet is 43 percent

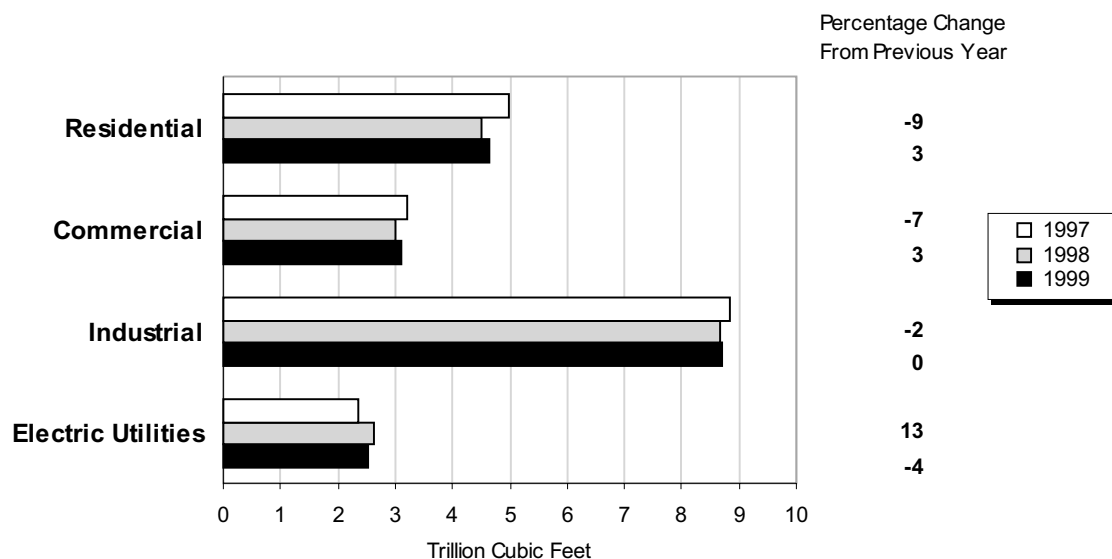
Figure HI2. Working Gas in Underground Storage in the United States, 1998-1999



Note: The 5-year average is calculated using the latest available monthly data. For example, the December average is calculated from December storage levels for 1995 to 1999. Data are reported as of the end of the month, thus October data represent the beginning of the heating season.

Source: Form EIA-191, "Underground Natural Gas Storage Report," Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition," and Short-Term Integrated Forecasting System.

Figure HI3. Natural Gas Delivered to Consumers, January-December, 1997-1999



Note: Electric utilities reflect January-September deliveries.

Source: Table 3.

higher than the September 1998 price of \$1.69. Cumulatively through September, the average wellhead price is \$2.01 per thousand cubic feet in 1999, 3 percent higher than for the same period in 1998.

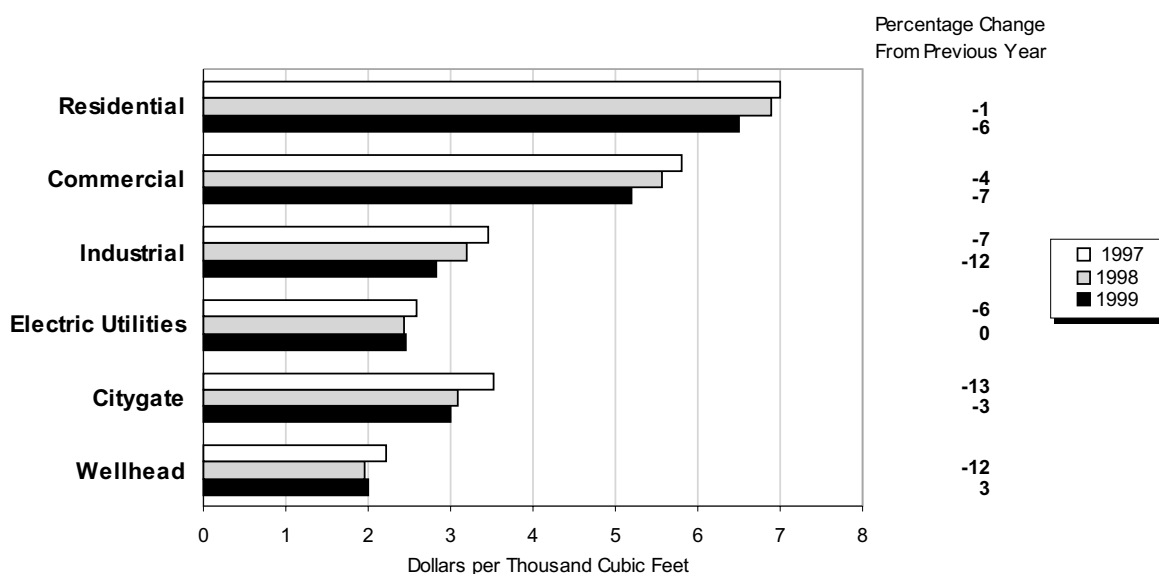
The average city gate price—the price paid for natural gas by local distribution companies—is estimated to be \$3.00 per thousand cubic feet through September 1999. This is 3 percent lower than in 1998. Cumulative residential, commercial, and industrial prices⁴ through September are all lower in 1999 than in 1998, by 6, 7, and 12 percent, respectively. The cumulative average price paid for natural gas by electric utilities, available through August 1999, is estimated to be \$2.45 per thousand cubic feet, one cent higher than in 1998.

More recently, futures settlement prices and average spot prices at the Henry Hub have been in the general

range of \$2.20 to \$2.60 per million Btu during December 1999, and have fallen below \$2.20 per million Btu in early January 2000 (Figure HI5). Generally mild temperatures from November 1999 through early January 2000, and plentiful supplies of natural gas in storage have contributed to keeping prices below \$3.00 per million Btu.

“Y2K” problems were few and minor in the natural gas industry as the result of extensive preparations for the rollover from 1999 to 2000. Several electricity generators in the Northeast switched from natural gas to on-site supplies of oil over the New Year’s weekend as a precaution,⁵ but no “Y2K” delivery problems were reported on natural gas pipelines or distribution systems. Minor glitches, such as the date “1/1/100” appearing on a pipeline company’s Internet site for capacity availability, were readily corrected.⁶

Figure HI4. Average Delivered and Wellhead Natural Gas Prices, January-September, 1997-1999



Note: Commercial and industrial average prices reflect onsystem sales only. The reporting of electric utility prices is 1 month behind the reporting of other prices.

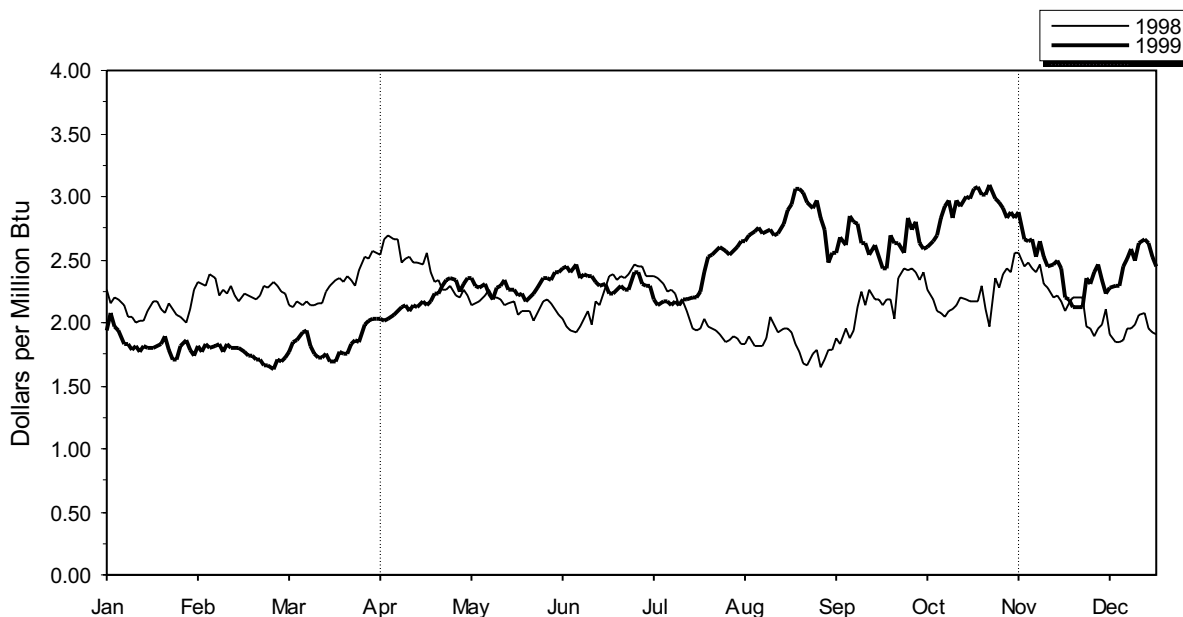
Source: Table 4.

⁴ End-use prices in the residential, commercial, and industrial sectors are for onsystem gas sales only. While monthly onsystem sales are nearly 100 percent of residential deliveries, during 1999 they have ranged from 54 to 72 percent of commercial deliveries and only 15 to 19 percent of industrial deliveries (Table 4).

⁵ “Cash piggybacks on a stronger NYMEX,” *Gas Daily* (December 30, 1999), p. 1.

⁶ “A Scattering of Glitches Aside, Gas, Power Sectors Pass Y2K OK,” *Natural Gas Week* (January 10, 2000), p. 3.

Figure HI5. Daily Futures Settlement Prices at the Henry Hub



Note: The future price is for the nearby month contract, that is, for the next contract to terminate trading. Contracts are traded on the New York Mercantile Exchange. April 1 is the beginning of the natural gas storage refill season. November 1 is the beginning of the heating season.

Source: Commodity Futures Trading Commission, Division of Economic Analysis.